Nuclear Instruments and Methods in Physics Research B 149 (1999) 529–536

ELSEVIER

NIM B
Beam Interactions with Materials & Atoms

Author index

Abidi, S., see Benoit-Cattin, P. 149 (1999) 257
Acquadro, J.C., see Barbatti, M. 149 (1999) 425
Ailloud, P., see Plumereau, G. 149 (1999) 153
Alexandropoulos, N.G. and S.K. Danakas, Search for evidence of double K-shell ionization in Mg by single X-ray photon inelastically scattered in the near threshold regime 149 (1999) 25
Ali, I., R. Dörner, O. Jagutzki, S. Nüttgens, V. Mergel, L. Spielberger, Kh. Khayyat, T. Vogt, H. Bräuning, K. Ullmann, R. Moshammer, J. Ullrich, S. Hagmann, K.-O. Groeneveld, C.L. Cocke and H. Schmidt-Böcking, Multi-hit detector system for complete momentum balance in spectroscopy in molecular fragmentation processes 149 (1999) 490
Angert, N., see Dobrev, D. 149 (1999) 207
Arčon, I., see Prešeren, R. 149 (1999) 238
Arstila, K., see Zhang, Y. 149 (1999) 477
Asghar, M., see Belgaid, M. 149 (1999) 383
Ashbaugh, M.D., see Keith, R.L. 149 (1999) 167
Azevedo, G. de M., J.C. Martini, M. Behar and P.L. Grande, Depth profiles and amorphization behavior under channeling conditions for low energy Bi ions implanted into Si crystals 149 (1999) 301

Bai, X., see Xu, J. 149 (1999) 147
Baptista, D.L., see Zawislak, F.C. 149 (1999) 336
Barbatti, M., N.V. de Castro Faria, J.C. Acquadro and R. Donangelo, Dependence on the incident angle of the electronic energy loss of planarly channeled fast ions 149 (1999) 425
Barbier, A., see Baudoing-Savois, R. 149 (1999) 213
Bardayan, D.W., see Carter, H.K. 149 (1999) 368
Barradas, N.P., C. Jeynes, R.P. Webb, U. Kreissig and R. Grötzschel, Unambiguous automatic evaluation of multiple Ion Beam Analysis data with Simulated Annealing (*Letter to the Editor*) 149 (1999) 233
Baudoing-Savois, R., M. De Santis, M.C. Saint-Lager, P. Dolle, O. Geaymond, P. Taunier, P. Jeantet, J.P. Roux, G. Renaud, A. Barbier, O. Robach, O. Ulrich, A. Mougin and G. Bérard, A new UHV diffractometer for surface structure and real time molecular beam deposition studies with synchrotron radiations at ESRF 149 (1999) 213
Behar, M., see Azevedo, G. de M. 149 (1999) 301
Behar, M., see Zawislak, F.C. 149 (1999) 336
Belgaid, M. and M. Asghar, Semi-empirical systematics of (n, α) cross sections for 14.5 MeV neutrons 149 (1999) 383
Benazeth, C., see Benoit-Cattin, P. 149 (1999) 257
Benazeth, C., see Richard-Viard, M. 149 (1999) 7
Benazeth, N., see Richard-Viard, M. 149 (1999) 7
Benoit-Cattin, P., M. Richard-Viard, C. Benazeth, S. Abidi, P. Cafarelli and J.P. Ziesel, Azimuthal effects in charge exchange processes during interaction of Ne^+, Na^+, F^+ ions with a NaCl (100) surface 149 (1999) 257
Benoit-Cattin, P., see Richard-Viard, M. 149 (1999) 7
Bérard, G., see Baudoing-Savois, R. 149 (1999) 213
Berger, P., see Plumereau, G. 149 (1999) 153
Bergqvist, M., see Herbig, J. 149 (1999) 119
Blackmon, J.C., see Carter, H.K. 149 (1999) 368
Bollhöfer, A., see Fietzke, J. 149 (1999) 353
Boutard, D., see Plumereau, G. 149 (1999) 153
Bräuning, H., see Ali, I. 149 (1999) 490
Brandt, T., T. Falke and W. Raith, Position-sensitive detection of positronium for studying transfer and transfer ionization in e^+–Ar collisions 149 (1999) 201

0168-583X/99/$ – see frontmatter © 1999 Elsevier Science B.V. All rights reserved

Breitenbach, J.B., see Carter, H.K. ... 149 (1999) 368
Brunel, M., see Pinčík, E. ... 149 (1999) 81
Bubb, I.F., see Zhang, Y. ... 149 (1999) 477
Budak, G., A. Karabulut, Ö. Şimşek and M. Ertuğrul, Measurement of total atomic attenuation, total atomic photoelectric and total atomic scattering cross sections in the range $40 \leqslant Z \leqslant 52$ ... 149 (1999) 379
Busnengo, H.F., see Corchs, S.E. ... 149 (1999) 247
Bystritskii, V., E. Garate, V. Grigoriev, A. Kharlov, E. Lavernia and X. Peng, The high power pulsed ion beam mixing of a titanium layer with an aluminum substrate ... 149 (1999) 61

Cabrera-Trujillo, R., Projectile isotope effects on electronic stopping power: Harmonic Oscillator approach (*Letter to the Editor*) ... 149 (1999) 228
Cafarelli, P., see Benoit-Cattin, P. ... 149 (1999) 257
Cafarelli, P., see Richard-Viard, M. ... 149 (1999) 7
Cai, Q., L. Pan, S. Dong and A. Zhu, Effects of 10-MeV ion irradiation on Au/Ta studied with scanning tunneling microscopy ... 149 (1999) 72
Cao, D., see Xie, D. ... 149 (1999) 136
Cao, J., see Xie, D. ... 149 (1999) 136
Carter, H.K., J. Kormicki, D.W. Stracener, J.B. Breitenbach, K.H. Guber, J.C. Blackmon, M.S. Smith and D.W. Bardayan, Erratum to: "First on-line results for As and F beams from HRIBF target/ion sources" [Nucl. Instr. and Meth. B 126 (1997) 166] ... 149 (1999) 368
Chang, Y.C., see Lee, C.S. ... 149 (1999) 294
Chang, Y.H., see Lee, C.S. ... 149 (1999) 294
Chayahara, A., see Fukumi, K. ... 149 (1999) 77
Chen, Z.Q. and S.J. Wang, Evidence of shallow positron traps in ion-implanted InP observed by maximum entropy reconstruction of positron lifetime distribution: a test of MELT ... 149 (1999) 343
Choi, W.K., see Song, J.H. ... 149 (1999) 361
Chryssoulis, S., see Xia, H. ... 149 (1999) 1
Čičmanec, P., see Pinčík, E. ... 149 (1999) 81
Cocke, C.L., see Ali, I. ... 149 (1999) 490
Corchs, S.E., H.F. Busnengo and R.D. Rivarola, Importance of the multicenter character of molecular aggregates in the theoretical description of the charge transfer process ... 149 (1999) 247
Cucinotta, F.A., see Townsend, L.W. ... 149 (1999) 401
Czyżewski, T., see Szydłowski, A. ... 149 (1999) 113

da Jornada, J.A.H., see Zawislak, F.C. ... 149 (1999) 336
Dai, Z., S. Yamamoto, K. Narumi, A. Miyashita and H. Naramoto, Gold nanoparticle fabrication in single crystal SiO_2 by MeV Au ion implantation and subsequent thermal annealing ... 149 (1999) 108
Danakas, S.K., see Alexandropoulos, N.G. ... 149 (1999) 25
Das, A., S. Dhara and A. Patnaik, N^+ ion–target interactions in PPO polymer: A structural characterization ... 149 (1999) 53
de Castro Faria, N.V., see Barbatti, M. ... 149 (1999) 425
De Santis, M., see Baudoing-Savois, R. ... 149 (1999) 213
de Voigt, M.J.A., (*Book Review*: Nuclear Methods in Science and Technology, by Yu. M. Tsipenyuk) ... 149 (1999) 243
Dhara, S., see Das, A. ... 149 (1999) 53
Dimov, S., see Xia, H. ... 149 (1999) 1
Ding, X.Z., see Zhao, J. ... 149 (1999) 325
Dlubek, G., S. Eichler, Ch. Hübner and Ch. Nagel, Reasons for the deviation of I_1/I_3 and τ_1 from the expected lifetime parameters of positronium annihilation in polymers ... 149 (1999) 501
Dobrev, D., J. Vetter and N. Angert, Electrochemical preparation of metal microstructures on large areas of etched ion track membranes ... 149 (1999) 207
Dolle, P., see Baudoing-Savois, R. ... 149 (1999) 213
Donangelo, R., see Barbatti, M. ... 149 (1999) 425
Dong, S., see Cai, Q. ... 149 (1999) 72
Dörner, R., see Ali, I. ... 149 (1999) 490
Dzhemilev, N.Kh., see Wucher, A. ... 149 (1999) 285

Eichler, S., see Dlubek, G. ... 149 (1999) 501
Ertuğrul, M., see Budak, G. ... 149 (1999) 379

Evans, C.E., see Ringo, M.C. 149 (1999) 177

Falke, T., see Brandt, T. 149 (1999) 201
Fan, Y., see Xu, J. 149 (1999) 147
Feng, Y.C. and S.P. Wong, A novel metal ion source for preparing hard coatings 149 (1999) 195
Fernando, Q., see Keith, R.L. 149 (1999) 167
Ferrari, C., see Udhayasankar, M. 149 (1999) 451
Fietzke, J., A. Bollhöfer, N. Frank and A. Mangini, Protactinium determination in manganese crust VA13/2 by thermal ionization mass spectrometry (TIMS) 149 (1999) 353
Fink, D., see Zawislak, F.C. 149 (1999) 336
Frank, N., see Fietzke, J. 149 (1999) 353
Fujii, K., see Fukumi, K. 149 (1999) 77
Fukumi, K., A. Chayahara, K. Ohora, N. Kitamura, Y. Horino, K. Fujii, M. Makihara, J. Hayakaya and N. Ohno, Photoluminescence of Cu^+-doped silica glass prepared by MeV ion implantation 149 (1999) 77
Fukusumi, Y., see Nakajima, K. 149 (1999) 31
Furuyama, Y., see Kubota, N. 149 (1999) 469

Gandolfi, A.J., see Keith, R.L. 149 (1999) 167
Garate, E., see Bystritskii, V. 149 (1999) 61
Geaymond, O., see Baudoing-Savois, R. 149 (1999) 213
Geissel, H., see Scheidenberger, C. 149 (1999) 241
Gnaser, H., Singly- and doubly-negative carbon clusters in sputtering: Energy spectra, abundance distributions and unimolecular fragmentation 149 (1999) 38
Grötzschel, R., see Barradas, N.P. 149 (1999) 233
Grande, P.L., see Azevedo, G. de M. 149 (1999) 301
Grande, P.L., see Zawislak, F.C. 149 (1999) 336
Grigoriev, V., see Bystritskii, V. 149 (1999) 61
Groeneveld, K.-O., see Ali, I. 149 (1999) 490
Guber, K.H., see Carter, H.K. 149 (1999) 368
Guittet, M.J., see Plumereau, G. 149 (1999) 153

Hagmann, S., see Ali, I. 149 (1999) 490
Han, H.-S., see Yi, C.-Y. 149 (1999) 263
Hanamoto, K., see Hosono, T. 149 (1999) 67
Hayakaya, J., see Fukumi, K. 149 (1999) 77
He, F., see Xu, J. 149 (1999) 147
Herbig, J., C.T. Reimann, M. Bergqvist, S. Oscarsson and I.V. Vorobyova, Surface track formation on mica surfaces due to grazing incidence 20.2 MeV C_{60} ions: a comparative study employing shadow-replica electron microscopy, tapping-mode and phase-imaging scanning force microscopy 149 (1999) 119
Hnatowicz, V., see Švorčík, V., ... 149 (1999) 312
Hnatowicz, V., see Švorčík, V., ... 149 (1999) 331
Hole, D.E., see Stepanov, A.L. 149 (1999) 89
Horino, Y., see Fukumi, K. 149 (1999) 77
Hosaka, K., N. Matsunami and H. Tawara, Secondary charged particles emitted from non-metallic surfaces under low-energy ion impact 149 (1999) 414
Hosono, T., K. Hanamoto, T. Uéno, I. Kitabatake, M. Sasaki, Y. Nakayama and S. Nishino, Study on thin SiC layer split by hydrogen implantation in SiC 149 (1999) 67
Hribar, M., see Preseren, R. 149 (1999) 238
Hu, B., Liu, Z. and Qi, Z. The energy loss of ^{16}O ions in seven metallic elements in velocity-proportional region 149 (1999) 395
Hübner, C., see Dlubek, G. 149 (1999) 501
Huhta, M.S., see Ringo, M.C. 149 (1999) 177

Isobe, M., see Kubota, M. 149 (1999) 514

Jagutzki, O., see Ali, I. 149 (1999) 490
Jaskóła, M., see Szydłowski, A. 149 (1999) 113
Jeantet, P., see Baudoing-Savois, R. 149 (1999) 213

Jeong, K., see Song, J.H. ... 149 (1999) 361
Jergel, M., see Pinčík, E. ... 149 (1999) 81
Jeynes, C., see Barradas, N.P. ... 149 (1999) 233
Jiang, B.Y., see Zhao, J. ... 149 (1999) 325
Jin, W.-G., See Kubota, M. ... 149 (1999) 514
Jolie, J., see Materna, Th. ... 149 (1999) 141

Karabulut, A., see Budak, G. ... 149 (1999) 379
Katsuragawa, H., see Kubota, M. ... 149 (1999) 514
Keinonen, J., see Zhang, Y. ... 149 (1999) 477
Keith, R.L., A.J. Gandolfi, L.C. McIntyre Jr., M.D. Ashbaugh and Q. Fernando, Analysis of heavy metal deposition in renal tissue by sectional mapping using PIXE ... 149 (1999) 167
Kharlov, A., see Bystritskii, V. ... 149 (1999) 61
Khayyat, Kh., see Ali, I. ... 149 (1999) 490
Kim, H.B., see Song, J.H. ... 149 (1999) 361
Kim, K.H., see Song, J.H. ... 149 (1999) 361
Kim, S.C., see Song, J.H. ... 149 (1999) 361
Kimura, K., see Nakajima, K. ... 149 (1999) 31
Kitabatake, I., see Hosono, T. ... 149 (1999) 67
Kitamura, A., see Kubota, N. ... 149 (1999) 469
Kitamura, N., see Fukumi, K. ... 149 (1999) 77
Kitoba, U., see Shiomi-Tsuda, N. ... 149 (1999) 17
Kodre, A., see Prešeren, R. ... 149 (1999) 238
Korman, A., see Szydłowski, A. ... 149 (1999) 113
Kormicki, J., see Carter, H.K. ... 149 (1999) 368
Kreissig, U., see Barradas, N.P. ... 149 (1999) 233
Kubota, M., M. Isobe, T. Minowa, W.-G. Jin, H. Katsuragawa and H. Uematsu, Laser-ablation charge exchange for collinear resonance ionization spectroscopy ... 149 (1999) 514
Kubota, N., A. Taniike, Y. Furuyama and A. Kitamura, RBS analysis of deuterium distribution with coincidence detection of recoil particles ... 149 (1999) 469
Kučera, M., see Pinčík, E. ... 149 (1999) 81
Kucheyev, S.O., see Titov, A.I. ... 149 (1999) 129
Kumar, J., see Udhayasankar, M. ... 149 (1999) 451
Kutner, V.B., see Reutov, V.F. ... 149 (1999) 319
Kyle, D.J., B.L. Weiss, Fluorescence characteristics of Er-implanted arsenic-doped silica glass waveguides ... 149 (1999) 447

Ladieu, F., see Plumereau, G. ... 149 (1999) 153
Lavernia, E., see Bystritskii, V. ... 149 (1999) 61
Lazzarini, L., see Udhayasankar, M. ... 149 (1999) 451
Lebedev, A.N., see Reutov, V.F. ... 149 (1999) 319
Lee, C.S., Y.C. Chang and Y.H. Chang, The cascade effect on the light emission from an aluminum surface produced by ion bombardment ... 149 (1999) 294
Lee, J.C., see Song, J.H. ... 149 (1999) 361
Lee, M.H., see Song, J.H. ... 149 (1999) 361
Lennard, W.N., see Xia, H. ... 149 (1999) 1
Li, M.M. and D.J. O'Connor, Simulation of multiple scattering background in heavy ion backscattering spectrometry ... 149 (1999) 460
Lin, Z.X., see Zhao, J. ... 149 (1999) 325
Liu, X.H., see Zhao, J. ... 149 (1999) 325
Liu, Z., see Hu, B. ... 149 (1999) 395

Magudapathy, P., see Udhayasankar, M. ... 149 (1999) 451
Majid, C.A., X-ray investigation of amorphization of ion-implanted Al–Mn ... 149 (1999) 433
Makihara, M., see Fukumi, K. ... 149 (1999) 77
Mangini, A., see Fietzke, J. ... 149 (1999) 353
Mannami, M., see Nakajima, K. ... 149 (1999) 31
Mao, D.S., see Zhao, J. ... 149 (1999) 325

Marrs, R.E., Self-cooling of highly charged ions during extraction from electron beam ion sources and traps 149 (1999) 182
Martini, J.C., see Azevedo, G. de M. 149 (1999) 301
Massoumi, G.R., see Xia, H. 149 (1999) 1
Materna, Th., J. Jolie and W. Mondelaers, Mapping elemental distributions of heavy elements using tunable gamma-ray beams 149 (1999) 141
Matsunami, N., see Hosaka, K. 149 (1999) 414
McIntyre Jr., L.C., see Keith, R.L. 149 (1999) 167
Mergel, V., see Ali, I. 149 (1999) 490
Minowa, T., see Kubota, M. 149 (1999) 514
Miyashita, A., see Dai, Z. 149 (1999) 108
Mondelaers, W., see Materna, Th. 149 (1999) 141
Moshammer, R., see Ali, I. 149 (1999) 490
Mougin, A., see Baudoing-Savois, R. 149 (1999) 213
Nagel, C., see Dlubek, G. 149 (1999) 501

Nair, K.G.M., see Udhayasankar, M. 149 (1999) 451
Naito, S., see Nakajima, K. 149 (1999) 31
Nakajima, K., Y. Fukusumi, K. Kimura, M. Mannami, M. Yamamoto and S. Naito, Position-dependent stopping power of low velocity rare gas atoms at a SnTe(001) surface 149 (1999) 31
Nakayama, Y., see Hosono, T. 149 (1999) 67
Naramoto, H., see Dai, Z. 149 (1999) 108
Narumi, K., see Dai, Z. 149 (1999) 108
Nishino, S., see Hosono, T. 149 (1999) 67
Norbury, J.W., see Townsend, L.W. 149 (1999) 401
Nüttgens, S., see Ali, I. 149 (1999) 490

Öchsner, R., see Švorčík, V. 149 (1999) 331
O'Connor, D.J., see Li, M.M. 149 (1999) 460
Ogawa, H., see Shiomi-Tsuda, N. 149 (1999) 17
Ohno, N., see Fukumi, K. 149 (1999) 77
Ohora, K., see Fukumi, K. 149 (1999) 77
Okuyama, F. and H. Takamori, Evidence for palladium droplet formation due to deuterium ion irradiation (*Letter to the Editor*) 149 (1999) 521
Oscarsson, S., see Herbig, J. 149 (1999) 119

Padežnik Gomilšek, J., see Prešeren, R. 149 (1999) 238
Pan, H., see Xie, D. 149 (1999) 136
Pan, L., see Cai, Q. 149 (1999) 72
Patnaik, A., see Das, A. 149 (1999) 53
Peng, X., see Bystritskii, V. 149 (1999) 61
Penner-Hahn, J.E., see Ringo, M.C. 149 (1999) 177
Pinčík, E., M. Jergel, M. Kučera, M. Brunel, P. Čičmanec and V. Šmatko, Modification of the high-doped GaAs surface region by its exposure to 150 keV proton beam 149 (1999) 81
Plumereau, G., P. Ailloud, P. Berger, D. Boutard, M. J. Guittet and F. Ladieu, Probing overheatings under microprobe irradiation via Zn vaporisation 149 (1999) 153
Porter, L.E., Values of Bethe–Bloch stopping power parameters for Vyns (vinylchloride–vinylacetate copolymer) extracted from stopping power measurements with 0.55–1.75 MeV protons and 1.03–3.22 MeV alpha particles 149 (1999) 373
Prešeren, R., A. Kodre, I. Arčon, J. Padežnik Gomilšek and M. Hribar, A simple heat-pipe cell for X-ray absorption spectrometry of potassium vapor (*Letter to the Editor*) 149 (1999) 238
Prošková, K., see Švorčík, V. 149 (1999) 312

Qi, Z., see Hu, B. 149 (1999) 395

Raith, W., see Brandt, T. 149 (1999) 201
Ramasamy, P., see Udhayasankar, M. 149 (1999) 451
Ramsey, C.R., see Townsend, L.W. 149 (1999) 401

Reimann, C.T., see Herbig, J. ... 149 (1999) 119
Renaud, G., see Baudoing-Savois, R. ... 149 (1999) 213
Reutov, V.F., A.S. Sokhatsky, V.B. Kutner and A.N. Lebedev, Structural modifications in silicon irradiated successively by N^+ and He^+ or Ar^{8+} and He^+ ions ... 149 (1999) 319
Richard-Viard, M., N. Benazeth, P. Benoit-Cattin, J.P. Ziesel, C. Benazeth and P. Cafarelli, Charge exchange in scattering of atomic and molecular deuterium ions on a NaCl surface ... 149 (1999) 7
Richard-Viard, M., see Benoit-Cattin, P. ... 149 (1999) 257
Ringo, M.C., M.S. Huhta, G. Shea-McCarthy, J.E. Penner-Hahn and C.E. Evans, On-line X-ray fluorescence detection for capillary electrophoresis separations ... 149 (1999) 177
Rivarola, R.D., see Corchs, S.E. ... 149 (1999) 247
Robach, O., see Baudoing-Savois, R. ... 149 (1999) 213
Rodríguez-Fernández, L., see Xia, H. ... 149 (1999) 1
Roux, J.P., see Baudoing-Savois, R. ... 149 (1999) 213
Rybka, V., see Švorčík, V., ... 149 (1999) 312
Rybka, V., see Švorčík, V., ... 149 (1999) 331
Ryssel, H., see Švorčík, V., ... 149 (1999) 331

Sadowski, M., see Szydłowski, A. ... 149 (1999) 113
Saint-Lager, M.C., see Baudoing-Savois, R. ... 149 (1999) 213
Saitoh, M., see Shiomi-Tsuda, N. ... 149 (1999) 17
Sajavaara, T., see Zhang, Y. ... 149 (1999) 477
Sakamoto, N., see Shiomi-Tsuda, N. ... 149 (1999) 17
Sasaki, M., see Hosono, T. ... 149 (1999) 67
Scheidenberger, C. and H. Geissel, Erratum to: "Penetration of relativistic heavy ions through matter" [Nucl. Instr. and Meth. B 135 (1998) 25] ... 149 (1999) 241
Schmidt-Böcking, H., see Ali, I. ... 149 (1999) 490
Sekar, K., see Udhayasankar, M. ... 149 (1999) 451
Shea-McCarthy, G., see Ringo, M.C. ... 149 (1999) 177
Shi, L., see Xu, H. ... 149 (1999) 390
Shiomi-Tsuda, N., N. Sakamoto, H. Ogawa, M. Tanaka, M. Saitoh and U. Kitoba, Stopping powers of N_2 and O_2 for protons from 4.0 to 13.0 MeV ... 149 (1999) 17
Şimşek, Ö., see Budak, G. ... 149 (1999) 379
Skorupa, W., see Weber, R. ... 149 (1999) 99
Skorupa, W., see Yankov, R.A. ... 149 (1999) 445
Šmatko, V., see Pinčík, E. ... 149 (1999) 81
Smith, M.S., see Carter, H.K. ... 149 (1999) 368
Sokhatsky, A.S., see Reutov, V.F. ... 149 (1999) 319
Song, J.H., W.K. Choi, K.H. Kim, J.C. Lee, S.C. Kim, H.B. Kim, M.H. Lee, K. Jeong and C.N. Whang, MeV $^4He^{++}$ channeling studies of epitaxially grown Pt films on Al_2O_3(0 0 0 1) ... 149 (1999) 361
Spielberger, L., see Ali, I. ... 149 (1999) 490
Stepanov, A.L., D.E. Hole and P.D. Townsend, Modification of size distribution of ion implanted silver nanoparticles in sodium silicate glass using laser and thermal annealing ... 149 (1999) 89
Stracener, D.W., see Carter, H.K. ... 149 (1999) 368
Sundaravel, B., see Udhayasankar, M. ... 149 (1999) 451
Švorčík, V., K. Prošková, V. Hnatowicz and V. Rybka, Iodine penetration and doping of ion-modified polyethylene ... 149 (1999) 312
Švorčík, V., V. Rybka, J. Vacík, V. Hnatowicz, R. Öchsner and H. Ryssel, Li^+ grafting of ion irradiated polyethylene ... 149 (1999) 331
Szydłowski, A., M. Sadowski, T. Czyżewski, M. Jaskóła and A. Korman, Comparison of responses of CR-39, PM-355 and PM-600 track detectors to low-energy hydrogen and helium ions ... 149 (1999) 113

Takamori, H., see Okuyama, F. ... 149 (1999) 521
Tanaka, M., see Shiomi-Tsuda, N. ... 149 (1999) 17
Taniike, A., see Kubota, N. ... 149 (1999) 469
Taunier, P., see Baudoing-Savois, R. ... 149 (1999) 213
Tawara, H., see Hosaka, K. ... 149 (1999) 414

Titov, A.I. and S.O. Kucheyev, Damage accumulation in Si during N^+ and N_2^+ bombardment along random and channeling directions 149 (1999) 129
Townsend, L.W., C.R. Ramsey, R.K. Tripathi, F.A. Cucinotta and J.W. Norbury, Optical model methods of predicting nuclide production cross sections from heavy ion fragmentation 149 (1999) 401
Townsend, P.D., see Stepanov, A.L. 149 (1999) 89
Tripathi, R.K., see Townsend, L.W. 149 (1999) 401

Uematsu, H., see Kubota, M. 149 (1999) 514
Ueno, T., see Hosono, T. 149 (1999) 67
Ueno, T., see Hosono, T. 149 (1999) 67
Udhayasankar, M., J. Kumar, P. Ramasamy, K. Sekar, B. Sundaravel, C. Ferrari, L. Lazzarini, P. Magudapathy and K.G.M. Nair, The study of structural properties of 100 keV hydrogen ion implanted semi-insulating GaAs single crystals 149 (1999) 451
Ullmann, K., see Ali, I. 149 (1999) 490
Ullrich, J., see Ali, I. 149 (1999) 490
Ulrich, O., see Baudoing-Savois, R. 149 (1999) 213

Vacík, J., see Švorčík, V., ... 149 (1999) 331
Verkhoturov, S.V., see Wucher, A. 149 (1999) 285
Veryovkin, I.V., see Wucher, A. 149 (1999) 285
Vetter, J., see Dobrev, D. 149 (1999) 207
Vogt, T., see Ali, I. 149 (1999) 490
Vorobyova, I.V., see Herbig, J. 149 (1999) 119

Wang, S.J., see Chen, Z.Q. 149 (1999) 343
Webb, R.P., see Barradas, N.P. 149 (1999) 233
Weber, R. and W. Skorupa, Experimental investigation of Ostwald ripening in an implanted system 149 (1999) 99
Weiss, B.L., see Kyle, D.J. 149 (1999) 447
Whang, C.N., see Song, J.H. 149 (1999) 361
Whitlow, H.J., see Zhang, Y. 149 (1999) 477
Winzell, T., see Zhang, Y. 149 (1999) 477
Wong, S.P., see Feng, Y.C. 149 (1999) 195
Wucher, A., N.Kh. Dzhemilev, I.V. Veryovkin and S.V. Verkhoturov, Fragmentation lifetimes and the internal energy of sputtered clusters 149 (1999) 285

Xia, H., L. Rodríguez-Fernández, W.N. Lennard, G.R. Massoumi, S. Dimov and S. Chryssoulis, Range distribution of ^{31}P ions implanted into Ge 149 (1999) 1
Xie, D., D. Zhu, D. Cao, J. Cao, H. Pan and H. Xu, Modification of *c*-axis sapphire implanted with high dose yttrium ions 149 (1999) 136
Xu, H., Z. Zhou, C. Zhang, G. Zhao and L. Shi, Excitation function and angular distribution for the $^{14}N(\alpha, p)^{17}O$ reaction 149 (1999) 390
Xu, H., see Xie, D. 149 (1999) 136
Xu, J., X. Bai, F. He and Y. Fan, The growth mechanism of the colored film on the stainless steel studied by ^{18}O tracing and nuclear reaction analysis 149 (1999) 147

Yamamoto, M., see Nakajima, K. 149 (1999) 31
Yamamoto, S., see Dai, Z. 149 (1999) 108
Yamazaki, H., Erratum to: "Matrix effects in SIMS analysis of high-dose boron implanted silicon wafers" [Nucl. Instr. and Meth. B 134 (1998) 121] 149 (1999) 242
Yang, G.Q., see Zhao, J. 149 (1999) 325
Yankov, R.A. and W. Skorupa, Comment on "Gettering of Cu by He-induced cavities in SIMOX materials" [Nucl. Instr. and Meth. B 134 (1998) 360] 149 (1999) 445
Yi, C.-Y. and H.-S. Han, A Monte Carlo algorithm for the Vavilov distribution 149 (1999) 263
Yu, Y.H., see Zhao, J. 149 (1999) 325

Zawislak, F.C., D.L. Baptista, M. Behar, D. Fink, P.L. Grande and J.A.H. da Jornada, Damage of ion irradiated C_{60} films 149 (1999) 336

Zhang, C., see Xu, H. 149 (1999) 390
Zhang, Y., H.J. Whitlow, T. Winzell, I.F. Bubb, T. Sajavaara, K. Arstila and J. Keinonen, Detection efficiency of time-of-flight energy elastic recoil detection analysis systems 149 (1999) 477
Zhang, Z.L., Transport theory of sputtering I: Depth of origin of sputtered atoms 149 (1999) 272
Zhao, G., see Xu, H. 149 (1999) 390
Zhao, J., D.S. Mao, Z.X. Lin, X.Z. Ding, B.Y. Jiang, Y.H. Yu, X.H. Liu and G.Q. Yang, Light-emitting materials fabricated by dual implantation of Si and N into SiO_2 films 149 (1999) 325
Zhou, Z., see Xu, H. 149 (1999) 390
Zhu, A., see Cai, Q. 149 (1999) 72
Zhu, D., see Xie, D. 149 (1999) 136
Ziesel, J.P., see Benoit-Cattin, P. 149 (1999) 257
Ziesel, J.P., see Richard-Viard, M. 149 (1999) 7

ELSEVIER

Nuclear Instruments and Methods in Physics Research B 149 (1999) 537–540

NIM B
Beam Interactions with Materials & Atoms

Subject index

Basic Data for Materials Modification and Analysis

Range distribution of ^{31}P ions implanted into Ge, H. Xia, L. Rodríguez-Fernández, W.N. Lennard, G.R. Massoumi, S. Dimov and S. Chryssoulis 149 (1999) 1
Charge exchange in scattering of atomic and molecular deuterium ions on a NaCl surface, M. Richard-Viard, N. Benazeth, P. Benoit-Cattin, J.P. Ziesel, C. Benazeth and P. Cafarelli 149 (1999) 7
Stopping powers of N_2 and O_2 for protons from 4.0 to 13.0 MeV, N. Shiomi-Tsuda, N. Sakamoto, H. Ogawa, M. Tanaka, M. Saitoh and U. Kitoba 149 (1999) 17
Search for evidence of double K-shell ionization in Mg by single X-ray photon inelastically scattered in the near threshold regime, N.G. Alexandropoulos and S.K. Danakas 149 (1999) 25
Position-dependent stopping power of low velocity rare gas atoms at a SnTe(001) surface, K. Nakajima, Y. Fukusumi, K. Kimura, M. Mannami, M. Yamamoto and S. Naito 149 (1999) 31
Projectile isotope effects on electronic stopping power: Harmonic Oscillator approach, R. Cabrera-Trujillo (*Letter to the Editor*) 149 (1999) 228
Erratum to: "Penetration of relativistic heavy ions through matter" [Nucl. Instr. and Meth. B 135 (1998) 25], C. Scheidenberger and H. Geissel 149 (1999) 241
Importance of the multicenter character of molecular aggregates in the theoretical description of the charge transfer process S.E. Corchs, H.F. Busnengo and R.D. Rivarola 149 (1999) 247
Azimuthal effects in charge exchange processes during interaction of Ne^+, Na^+, F^+ ions with a NaCl (100) surface, P. Benoit-Cattin, M. Richard-Viard, C. Benazeth, S. Abidi, P. Cafarelli and J.P. Ziesel 149 (1999) 257
A Monte Carlo algorithm for the Vavilov distribution, C.-Y. Yi and H.-S. Han 149 (1999) 263
Values of Bethe–Bloch stopping power parameters for Vyns (vinylchloride–vinylacetate copolymer) extracted from stopping power measurements with 0.55–1.75 MeV protons and 1.03–3.22 MeV alpha particles, L.E. Porter 149 (1999) 373
Measurement of total atomic attenuation, total atomic photoelectric and total atomic scattering cross sections in the range $40 \leqslant Z \leqslant 52$, G. Budak, A. Karabulut, Ö. Şimşek and M. Ertuğrul 149 (1999) 379
Semi-empirical systematics of (n,α) cross sections for 14.5 MeV neutrons, M. Belgaid and M. Asghar 149 (1999) 383
Excitation function and angular distribution for the $^{14}N(\alpha,p)^{17}O$ reaction, H. Xu, Z. Zhou, C. Zhang, G. Zhao and L. Shi 149 (1999) 390
The energy loss of ^{16}O ions in seven metallic elements in velocity-proportional region, B. Hu, Z. Liu and Z. Qi 149 (1999) 395
Optical model methods of predicting nuclide production cross sections from heavy ion fragmentation, L.W. Townsend, C.R. Ramsey, R.K. Tripathi, F.A. Cucinotta and J.W. Norbury 149 (1999) 401

Atomic Collisions in Solids

Singly- and doubly-negative carbon clusters in sputtering: Energy spectra, abundance distributions and unimolecular fragmentation, H. Gnaser 149 (1999) 38
Transport theory of sputtering I: Depth of origin of sputtered atoms, Z.L. Zhang 149 (1999) 272
Fragmentation lifetimes and the internal energy of sputtered clusters, A. Wucher, N.Kh. Dzhemilev, I.V. Veryovkin and S.V. Verkhoturov 149 (1999) 285
The cascade effect on the light emission from an aluminum surface produced by ion bombardment, C.S. Lee, Y.C. Chang and Y.H. Chang 149 (1999) 294
Secondary charged particles emitted from non-metallic surfaces under low-energy ion impact, K. Hosaka, N. Matsunami and H. Tawara 149 (1999) 414
Dependence on the incident angle of the electronic energy loss of planarly channeled fast ions, M. Barbatti, N.V. de Castro Faria, J.C. Acquadro and R. Donangelo 149 (1999) 425

0168-583X/99/$ – see frontmatter © 1999 Elsevier Science B.V. All rights reserved

Ion Beam Modification of Materials

N^+ ion–target interactions in PPO polymer: A structural characterization, A. Das, S. Dhara and A. Patnaik .. 149 (1999) 53
The high power pulsed ion beam mixing of a titanium layer with an aluminum substrate, V. Bystritskii, E. Garate, V. Grigoriev, A. Kharlov, E. Lavernia and X. Peng 149 (1999) 61
Study on thin SiC layer split by hydrogen implantation in SiC, T. Hosono, K. Hanamoto, T. Ueno, I. Kitabatake, M. Sasaki, Y. Nakayama and S. Nishino 149 (1999) 67
Effects of 10-MeV ion irradiation on Au/Ta studied with scanning tunneling microscopy, Q. Cai, L. Pan, S. Dong and A. Zhu 149 (1999) 72
Photoluminescence of Cu^+-doped silica glass prepared by MeV ion implantation, K. Fukumi, A. Chayahara, K. Ohora, N. Kitamura, Y. Horino, K. Fujii, M. Makihara, J. Hayakaya and N. Ohno 149 (1999) 77
Modification of the high-doped GaAs surface region by its exposure to 150 keV proton beam, E. Pinčík, M. Jergel, M. Kučera, M. Brunel, P. Čičmanec and V. Šmatko 149 (1999) 81
Modification of size distribution of ion implanted silver nanoparticles in sodium silicate glass using laser and thermal annealing, A.L. Stepanov, D.E. Hole and P.D. Townsend 149 (1999) 89
Experimental investigation of Ostwald ripening in an implanted system, R. Weber and W. Skorupa 149 (1999) 99
Gold nanoparticle fabrication in single crystal SiO_2 by MeV Au ion implantation and subsequent thermal annealing, Z. Dai, S. Yamamoto, K. Narumi, A. Miyashita and H. Naramoto 149 (1999) 108
Depth profiles and amorphization behavior under channeling conditions for low energy Bi ions implanted into Si crystals, G. de M. Azevedo, J.C. Martini, M. Behar and P.L. Grande 149 (1999) 301
Iodine penetration and doping of ion-modified polyethylene, V. Švorčík, K. Prošková, V. Hnatowicz and V. Rybka 149 (1999) 312
Structural modifications in silicon irradiated successively by N^+ and He^+ or Ar^{8+} and He^+ ions, V.F. Reutov, A.S. Sokhatsky, V.B. Kutner and A.N. Lebedev 149 (1999) 319
Light-emitting materials fabricated by dual implantation of Si and N into SiO_2 films, J. Zhao, D.S. Mao, Z.X. Lin, X.Z. Ding, B.Y. Jiang, Y.H. Yu, X.H. Liu and G.Q. Yang 149 (1999) 325
Li^+ grafting of ion irradiated polyethylene, V. Švorčík, V. Rybka, J. Vacík, V. Hnatowicz, R. Öchsner and H. Ryssel 149 (1999) 331
X-ray investigation of amorphization of ion-implanted Al–Mn, C.A. Majid 149 (1999) 433
Comment on "Gettering of Cu by He-induced cavities in SIMOX materials" [Nucl. Instr. and Meth. B 134 (1998) 360], R.A. Yankov and W. Skorupa 149 (1999) 445
Fluorescence characteristics of Er-implanted arsenic-doped silica glass waveguides, D.J. Kyle, B.L. Weiss .. 149 (1999) 447
The study of structural properties of 100 keV hydrogen ion implanted semi-insulating GaAs single crystals, M. Udhayasankar, J. Kumar, P. Ramasamy, K. Sekar, B. Sundaravel, C. Ferrari, L. Lazzarini, P. Magudapathy and K.G.M. Nair 149 (1999) 451

Effects of Radiation

Comparison of responses of CR-39, PM-355, and PM-600 track detectors to low-energy hydrogen, and helium ions, A. Szydłowski, M. Sadowski, T. Czyżewski, M. Jaskóła and A. Korman 149 (1999) 113
Surface track formation on mica surfaces due to grazing incidence 20.2 MeV C_{60} ions: a comparative study employing shadow-replica electron microscopy, tapping-mode and phase-imaging scanning force microscopy, J. Herbig, C.T. Reimann, M. Bergqvist, S. Oscarsson and I.V. Vorobyova 149 (1999) 119
Damage accumulation in Si during N^+ and N_2^+ bombardment along random and channeling directions, A.I. Titov and S.O. Kucheyev 149 (1999) 129
Damage of ion irradiated C_{60} films, F.C. Zawislak, D.L. Baptista, M. Behar, D. Fink, P.L. Grande and J.A.H. da Jornada 149 (1999) 336
Evidence for palladium droplet formation due to deuterium ion irradiation, F. Okuyama and H. Takamori (*Letter to the Editor*) 149 (1999) 521

Analysis of Materials

Modification of *c*-axis sapphire implanted with high dose yttrium ions, D. Xie, D. Zhu, D. Cao, J. Cao, H. Pan and H. Xu 149 (1999) 136

Mapping elemental distributions of heavy elements using tunable gamma-ray beams, Th. Materna, J. Jolie and W. Mondelaers ... 149 (1999) 141
The growth mechanism of the colored film on the stainless steel studied by ^{18}O tracing and nuclear reaction analysis, J. Xu, X. Bai, F. He and Y. Fan ... 149 (1999) 147
Probing overheatings under microprobe irradiation via Zn vaporisation, G. Plumereau, P. Ailloud, P. Berger, D. Boutard, M. J. Guittet and F. Ladieu ... 149 (1999) 153
Analysis of heavy metal deposition in renal tissue by sectional mapping using PIXE, R.L. Keith, A.J. Gandolfi, L.C. McIntyre Jr., M.D. Ashbaugh and Q. Fernando ... 149 (1999) 167
On-line X-ray fluorescence detection for capillary electrophoresis separations, M.C. Ringo, M.S. Huhta, G. Shea-McCarthy, J.E. Penner-Hahn and C.E. Evans ... 149 (1999) 177
Unambiguous automatic evaluation of multiple Ion Beam Analysis data with Simulated Annealing, N.P. Barradas, C. Jeynes, R.P. Webb, U. Kreissig and R. Grötzschel (*Letter to the Editor*) ... 149 (1999) 233
Erratum to: "Matrix effects in SIMS analysis of high-dose boron implanted silicon wafers" [Nucl. Instr. and Meth. B 134 (1998) 121], H. Yamazaki ... 149 (1999) 242
Evidence of shallow positron traps in ion-implanted InP observed by maximum entropy reconstruction of positron lifetime distribution: a test of MELT, Z.Q. Chen and S.J. Wang ... 149 (1999) 343
Protactinium determination in manganese crust VA13/2 by thermal ionization mass spectrometry (TIMS), J. Fietzke, A. Bollhöfer, N. Frank and A. Mangini ... 149 (1999) 353
MeV $^4He^{++}$ channeling studies of epitaxially grown Pt films on $Al_2O_3(0\ 0\ 0\ 1)$, J.H. Song, W.K. Choi, K.H. Kim, J.C. Lee, S.C. Kim, H.B. Kim, M.H. Lee, K. Jeong and C.N. Whang ... 149 (1999) 361
Simulation of multiple scattering background in heavy ion backscattering spectrometry, M.M. Li and D.J. O'Connor ... 149 (1999) 460
RBS analysis of deuterium distribution with coincidence detection of recoil particles, N. Kubota, A. Taniike, Y. Furuyama and A. Kitamura ... 149 (1999) 469
Detection efficiency of time-of-flight energy elastic recoil detection analysis systems, Y. Zhang, H.J. Whitlow, T. Winzell, I.F. Bubb, T. Sajavaara, K. Arstila and J. Keinonen ... 149 (1999) 477

Ion Sources and Beam Optics

Self-cooling of highly charged ions during extraction from electron beam ion sources and traps, R.E. Marrs ... 149 (1999) 182
A novel metal ion source for preparing hard coatings, Y.C. Feng and S.P. Wong ... 149 (1999) 195
Erratum to: "First on-line results for As and F beams from HRIBF target/ion sources" [Nucl. Instr. and Meth. B 126 (1997) 166], H.K. Carter, J. Kormicki, D.W. Stracener, J.B. Breitenbach, K.H. Guber, J.C. Blackmon, M.S. Smith and D.W. Bardayan ... 149 (1999) 368

Experimental Methods and Equipment

Position-sensitive detection of positronium for studying transfer and transfer ionization in e^+–Ar collisions, T. Brandt, T. Falke and W. Raith ... 149 (1999) 201
Electrochemical preparation of metal microstructures on large areas of etched ion track membranes, D. Dobrev, J. Vetter and N. Angert ... 149 (1999) 207
A new UHV diffractometer for surface structure and real time molecular beam deposition studies with synchrotron radiations at ESRF, R. Baudoing-Savois, M. De Santis, M.C. Saint-Lager, P. Dolle, O. Geaymond, P. Taunier, P. Jeantet, J.P. Roux, G. Renaud, A. Barbier, O. Robach, O. Ulrich, A. Mougin and G. Bérard ... 149 (1999) 213
A simple heat-pipe cell for X-ray absorption spectrometry of potassium vapor, R. Preseren, A. Kodre, I. Arčon, J. Padežnik Gomilsek and M. Hribar (*Letter to the Editor*) ... 149 (1999) 238
Multi-hit detector system for complete momentum balance in spectroscopy in molecular fragmentation processes, I. Ali, R. Dörner, O. Jagutzki, S. Nüttgens, V. Mergel, L. Spielberger, Kh. Khayyat, T. Vogt, H. Bräuning, K. Ullmann, R. Moshammer, J. Ullrich, S. Hagmann, K.-O. Groeneveld, C.L. Cocke and H. Schmidt-Böcking ... 149 (1999) 490
Reasons for the deviation of I_1/I_3 and τ_1 from the expected lifetime parameters of positronium annihilation in polymers, G. Dlubek, S. Eichler, Ch. Hübner and Ch. Nagel ... 149 (1999) 501
Laser-ablation charge exchange for collinear resonance ionization spectroscopy, M. Kubota, M. Isobe, T. Minowa, W.-G. Jin, H. Katsuragawa and H. Uematsu ... 149 (1999) 514

Letters to the Editor

Projectile isotope effects on electronic stopping power: Harmonic Oscillator approach, R. Cabrera-Trujillo ... 149 (1999) 228
Unambiguous automatic evaluation of multiple Ion Beam Analysis data with Simulated Annealing, N.P. Barradas, C. Jeynes, R.P. Webb, U. Kreissig and R. Grötzschel ... 149 (1999) 233
A simple heat-pipe cell for X-ray absorption spectrometry of potassium vapor, R. Prešeren, A. Kodre, I. Arčon, J. Padežnik Gomilšek and M. Hribar ... 149 (1999) 238
Evidence for palladium droplet formation due to deuterium ion irradiation, F. Okuyama and H. Takamori ... 149 (1999) 521

Errata

Erratum to: "Penetration of relativistic heavy ions through matter" [Nucl. Instr. and Meth. B 135 (1998) 25], C. Scheidenberger and H. Geissel ... 149 (1999) 241
Erratum to: "Matrix effects in SIMS analysis of high-dose boron implanted silicon wafers" [Nucl. Instr. and Meth. B 134 (1998) 121], H. Yamazaki ... 149 (1999) 242
Erratum to: "First on-line results for As and F beams from HRIBF target/ion sources" [Nucl. Instr. and Meth. B 126 (1997) 166], H.K. Carter, J. Kormicki, D.W. Stracener, J.B. Breitenbach, K.H. Guber, J.C. Blackmon, M.S. Smith and D.W. Bardayan ... 149 (1999) 368

Book Reviews

Nuclear Methods in Science and Technology, by Yu. M. Tsipenyuk, M.J.A. de Voigt ... 149 (1999) 243